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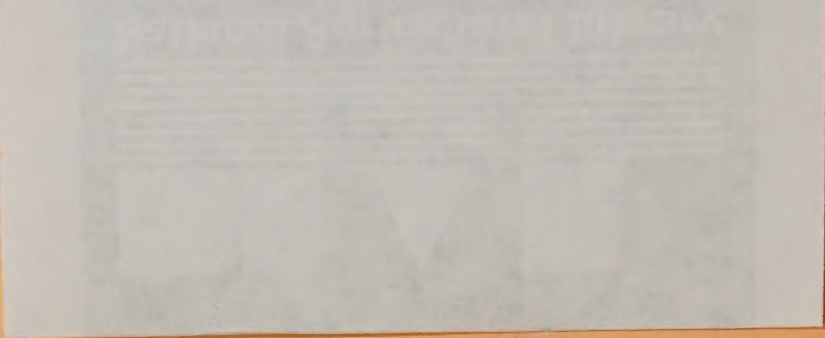
ECONOMIC RESEARCH SERVICE
UNITED STATES DEPARTMENT OF AGRICULTURE

CURRENT PROGRAM
and
PROGRESS REPORT

of the

FOREIGN REGIONAL ANALYSIS DIVISION

Fiscal Year 1970



PREFACE

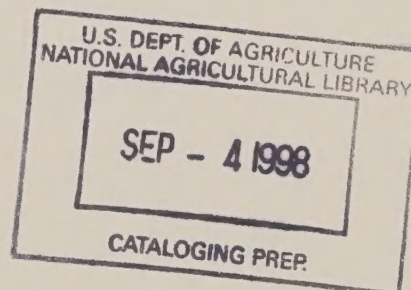
This progress report is primarily a tool for use of scientists and administrators in program coordination, development and evaluation. The summaries of progress include some tentative results that have not been tested sufficiently to justify general release. Such findings, when adequately confirmed, will be released promptly through established channels. Because of this, the report is not intended for publication and should not be referred to in literature citations. Copies are distributed only to members of Department staff and others having a special interest in the development of public agricultural research programs.

This progress report was compiled in the Foreign Regional Analysis Division, Economic Research Service, U.S. Department of Agriculture, Washington, D.C. 20250.

November 1970

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Projections to 1980 indicate that import demand for wheat is expected to be sluggish in developed areas, but stronger in the LDC's. Concessional terms of trade could further increase wheat exports to the LDC's. Continuation of the "Green Revolution" would result in lower world import demand for rice, a demand traditionally centered in the LDC's. Demand in the developed area is expected to rise moderately, but the increase will be small relative to potential export supplies of rice. Import demand for coarse grains in developed areas, particularly Japan, is expected to be strong.

Demand for oilcake should continue to be strong because of an expanding world livestock economy. For the developed area, very little growth in import demand for oil is projected. The import demand is strong for cotton textiles in the developed countries but weak for lint.

Value of exports in the LDC's for the above products is projected to reach a level of \$10.7 billion in 1980, indicating an annual growth rate of 2 percent from the 1964-66 base period. The projected value of imports for the same commodities--\$6.7 billion--represents an increase of 3 percent a year. Thus, the projected net trade balance for the LDC's in these commodities is less favorable than during the base period.

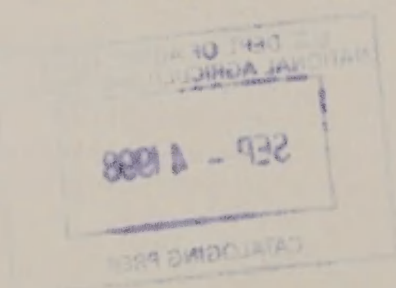
General implication that can be drawn from the commodity projections are:

Supplies of most crops and fibers appear likely to exceed demand at current prices. Prices are likely to decline, therefore, unless major producers adjust production downward.

Much of the increase in production of food and fiber in the LDC's would be absorbed by increases in domestic consumption, and the LDC's could account for an increasing share of world agricultural imports.

Export earnings for commodities supplied only or principally by LDC's--such as tropical fruits and beverages--are expected to rise with projected income growth in importing countries.

LDC's may find it difficult to achieve a consensus on trade policy, since the less developed area includes both importers and exporters.



ERRATA

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INTRODUCTION

The Foreign Regional Analysis Division is one of two research divisions of the Economic Research Service which works in the foreign field. Its function, through basic and applied research, is to analyze effects of world, regional, and country developments and trends in agricultural production, consumption, and trade to disclose opportunities for developing new markets and expanding existing markets for U.S. farm products.

The research and service work of the Division involves 41.5 scientist man-years. The members of this staff perform economic and statistical analysis work in Washington; travel abroad and gather data not available through other channels; and plan, negotiate, and direct the execution of research contracts.

The Foreign Regional Analysis Division is reimbursed for research work done for the Agency for International Development and other Government agencies. The Division has annually prepared seven major monographs on the agricultural resources, production, consumption, trade and institutions of selected countries for C.I.A. Four and one-half scientist man-years have customarily been involved in this activity. They are included in the Division total, but are not included above in the three research areas of the Division. This work was discontinued at the end of fiscal year 1970.

The Division also does research for other agencies of the government for which it is reimbursed, and from time to time personnel of the Division undertake research projects for international organizations for which it is reimbursed.

There is close cooperation between the Foreign Regional Analysis Division and the Foreign Development and Trade Division, and between the Division and the Foreign Agricultural Service to preclude duplication or overlapping of work. The work of FRAD involves analysis of country and commodity problems, as well as problems of a regional or cross-country, cross-commodity nature. The work of FRAD involves long-term analyses in greater depth than studies carried out in FAS for current operational purposes.

In addition to its own resources, FRAD utilizes market development funds of Section 104 b (1), Title I, P.L. 480, administered by FAS, to contract with Land-Grant Universities and other economic and marketing organizations to perform research on market potential in countries and regions. Some P.L. 480 funds are advanced by FAS to cover travel abroad in servicing these contracts.

This document covers the period between July 1, 1969 to June 30, 1970.

Highlights of Two of the Division's Research Findings

- A. The Impact of High-yielding Varieties of Rice on the Economies of the South-east Asian Countries--The new high-yielding varieties of rice developed in the late 1960's at the International Rice Research Institute in the Philippines, can produce a sizable increase in rice yields in Southeast Asian countries, when their use is accompanied by reliable irrigation, large amounts of fertilizer, and plant protection agents. Compared with traditional varieties, these new seeds require less land and labor per unit of production, but place a higher premium on well irrigated land and purchased inputs. They have the potential of reducing the unit cost of rice production, and thus lowering the cost of the major food consumed in Southeast Asia.

Use of these new varieties has been greatest in the Philippines, but they are being adopted in the other Southeast Asian countries, except Thailand and Cambodia where conditions are not as suitable. Thus far, the new varieties have benefited from government price supports, subsidized inputs and credit, and other special programs. Their quality has been low, causing them to sell at a discount, and numerous marketing and distribution problems have been encountered.

Because these new rice varieties can be grown successfully on farms of varying sizes using either labor- or capital-intensive methods, they are well suited to the conditions prevailing in Southeast Asia where farms are small and labor abundant. In practice, however, the need for suitable irrigation favors farmers possessing such land, and the need for larger amounts of purchased inputs favors larger farmers with access to credit or with better incomes. These advantages can also permit some farmers to substitute capital for labor, primarily in the form of machinery, in rice production.

The comparatively inelastic demand for rice limits the extent to which production can increase before price depressing effects are encountered, thus reducing the incentives of rice producers, who make up the dominant farm group, or major farm group, in all countries. This, in turn, limits the growth in agricultural production and employment achievable in rice production, unless greater diversification in the agricultural economies of these countries takes place. Diversified production would also permit greater use of multiple cropping, which is facilitated by the new varieties and better irrigation.

The need for increased agricultural employment utilizing labor intensive methods on small farms requires policies designed to enhance the adoption of this new technology within this set of constraints. Policies designed to achieve rice self-sufficiency at higher than world price levels, and at the expense of lower cost traditional exporters, need to be reconsidered.

- B. World Demand Prospects for Agricultural Exports of Less Developed Countries in 1980--National development plans and programs in many less developed countries (LDC's) are strongly dependent upon the fortunes of their agricultural exports. Economic development of LDC's depends upon expanding foreign exchange requirements to pay for increased imports of goods, technical skills, and capital equipment. Since agricultural exports are the major source of foreign exchange earnings, there is growing concern that exports earnings will not keep pace with needs.

AREA NO. 1 -- CURRENT SITUATION AND SHORT-RUN OUTLOOK

OBJECTIVES

Current intelligence on foreign production, consumption, and trade is needed in order that the public may be adequately informed and that public policy-makers may render intelligent judgments and decisions. The problem is to evaluate current foreign developments significant to U.S. agriculture, and to provide U.S. policy-makers, agricultural export interests, and the American public with timely appraisals of these developments.

Objectives of this area include:

- (1) Appraisal of the current food and agricultural situation in foreign countries and the short-run outlook for the demand and supply of farm products;
- (2) Preparation of the periodic World Agricultural Situation and the Regional Agricultural Situation Reports;
- (3) Analysis of foreign policies designed to protect agriculture, encourage trade, and support prices and income of agricultural producers;
- (4) Preparation of annual indices of agricultural and food production to measure trends and compare rates of growth;
- (5) Preparation of supply-utilization tables for countries and commodities of greatest importance to U.S. trade interest;
- (6) Compilation and analysis of data on the agricultural economies of foreign countries for use in briefing U.S. officials and other individuals traveling abroad;
- (7) Analysis of foreign countries financial position, trade trends, and economic development (in cooperation with FDT).

USDA PROGRESS

A. World Agricultural Situation (continuing project)

Agricultural production last year fell somewhat below trend in the industrial countries but was above trend in the less developed countries. Production was well above trend in India, Pakistan, and Indonesia, and recovered to the trend line in Brazil. Total output in the less developed countries rose about 3 percent, but per capita output failed to increase because of the continued high rate of population growth in this group of countries. Canada was the only major industrial nation where production in 1969 was significantly above the trend. Average annual production of grain during 1966-69 was 115 million tons larger than in the preceding 4-year period. The bumper crops of the past 4 years raised the level of stocks and, although production did not increase in 1969/70, world grain supplies are the largest in history. Importing countries are accumulating sizable grain stocks, a characteristic usually associated with export economies. West Germany holds record stocks of wheat and Japan holds record stocks of rice. Efforts to dispose of these stocks include the diversion of some of the highest-cost grain in the world to livestock feed. In the last 2 years, new wheat and rice varieties have spread rapidly in Asia and, in 1968/69, they occupied about 7 percent of the riceland and about 16 percent of the wheatland. It is estimated that, under average weather conditions, they would add about 9 percent to rice production and 20 percent to wheat production in the area, based on the judgment that their yields are from 30 to 100 percent greater than traditional varieties raised under similar conditions.

B. Agricultural Policies of Foreign Countries (continuing project)

In support of U.S. policy makers, analyses were prepared on many topics including economic reforms in Eastern Europe, expansion of the European Community, devaluation of the French franc, Japan's rice supply-management policies, and the proposed international agreement on fats and oils.

C. The "Green Revolution"

During 1970, the new high-yielding varieties of wheat and rice continued to have a strong impact on agricultural developments, especially in Southeast and South Asia. Rapid adoption of high-yielding varieties of wheat and rice in India and Pakistan contributed markedly to increases in cereal production in these two countries since 1967. Adoption of the new high-yielding varieties of rice in some of the Southeast Asian countries contributed to improved rice production and reduced imports.

Whereas the initial interest in the high-yielding varieties was primarily enthusiasm over their ability to boost production in developing regions, considerable anxiety was expressed in late 1969 and 1970 about new problems associated with these seeds. On the one hand, anxiety was expressed about factors limiting adoption of these varieties, such as low quality, limited supplies of inputs, inadequate credit, and poorly developed marketing and distribution systems. On the other hand, concern was expressed over the employment and income distribution effects of the new technology, and their disruptive impact on trade patterns. While the new grain varieties brought

about improvements in production, they also brought about a reduction in the import needs of many traditional importers which in turn resulted in lower exports from traditional exporting regions, some of which were less developed countries. The new varieties were in some cases being relied upon to develop self-sufficiency in cereal production under high support prices. Anxiety was also expressed (especially with respect to India) about the tenancies of the new varieties to be adopted by more advanced farmers, and to displace labor which was in strong need of increased employment opportunities.

The general decline in world trade and prices of wheat and rice which continued into 1970 can in part be attributed to advances in production of these grains made possible by the new higher-yielding varieties.

D. Situation and Outlook, Western Hemisphere

1. Western Hemisphere Agricultural Situation (continuing project)--Prepared and distributed highlights on significant developments related to agricultural production and trade, analyzed in terms of implications for U.S. trade, for use within USDA and for publication. These and other developments were evaluated in the midyear and annual reviews of the 1969 agricultural situation and outlook for 1970.

Canadian grain and oilseed production continued to expand in 1969 in face of reduced exports, contributing to a paralyzing grain surplus; as reduced livestock numbers and rebuilding of herds contributed to a decline in output of livestock products. Agricultural output in Mexico and Chile were cut sharply by drought but conditions were favorable in other areas and Latin American production was slightly above the 1968 record. U.S. agricultural exports to the region dropped in 1969 due to the shipping strike, but strong economic growth trends in many Latin American countries indicate a record level of trade in 1970.

2. Agricultural Production Indices (continuing project)--Prepared preliminary production data for ADP calculations of agricultural and food production for AID in the fall of 1969. Revised data for final calculation of indices by ADP, used for the final publication.
3. Improvement of Statistical Records (continuing project)--Continued work on supply/utilization data for grains, cotton, coffee, sugar, and oilseeds for principal producing countries covering the period 1959-67. Developed series of data on harvested area of crops for ADP calculation of yields. Analyzed agricultural trade of countries for a series of years by SITC classification, including direction of trade for important products. Analyzed U.S. agricultural exports to countries by principal categories for recent years, and established procedures for current review of that trade at selected periods. Initiated project to update information on planting and harvesting periods for crops.
4. Basic Country and Regional Studies--These studies provide background on resources devoted to agriculture, its position in the economy, its organization and structure, Government policies and programs, and their relationship to current patterns and trends in production and trade.

During the period under review, a study was published for Uruguay. A preliminary draft, waiting Branch review, covers the countries and dependent territories of the Caribbean region. A study of Colombia is near completion and work is in progress on El Salvador, Jamaica, and Venezuela.

5. Servicing Activities--The situation and outlook staff continued to service numerous requests for briefing and information by other agencies in the USDA, and other government departments. Country specialists supplied information to many organizations and individuals interested in investments, trade, or other business activities related to agriculture in the region.
6. Future Work--Increasing emphasis will be given to analyses and dissemination of current information on agricultural and trade developments in the region. As resources permit, areas of research to be expanded in the future will include: (1) basic studies of agriculture and trade for four countries including Chile, the Dominican Republic, Guyana, Guatemala, Mexico, Nicaragua, and Trinidad and Tobago; (2) agricultural trade patterns with emphasis upon commodities and countries with a major interest to the U.S.; and (3) planting and harvesting seasons to provide a better basis for evaluating patterns of agricultural supplies for domestic use and export.

E. Situation and Outlook, Europe and Soviet Union

1. Europe and Soviet Union Agricultural Situation (continuing project)--Agricultural output in Western Europe remained at a high level in 1969. Wheat and milk surpluses continued to mount. Agricultural imports tended to stabilize while agricultural exports increased. Imports of feed grains may decrease further in 1970. Monetary instability in the European Community in 1969 led to emergency trade measures which set back its Common Agricultural Policy. Negotiations aimed at expanding EC membership are expected in 1970.

The agricultural situation developed unevenly in the Communist areas during 1969. China's progress was most significant, particularly in grain output. The Soviet Union reported declines in all major crops and experienced a 5 percent drop in net agricultural output. Drought in Czechoslovakia, East Germany, and Poland sharply lowered feed supplies. Higher corn production than the previous drought year in Bulgaria, Hungary, Romania, and Yugoslavia improved exports. North Korea, North Vietnam, and Mongolia showed no substantial change from previous years, and Cuba's major effort in 1969/70 was tied to the planned 10 million-ton sugarcane harvest. U.S. exports to Eastern Europe and the Soviet Union declined about 20 percent from the 1968 levels.

2. Agricultural Production Indices and Supply/Utilization Tables (continuing project)--Indices were prepared for the countries of Western and Eastern Europe and for the Soviet Union. The indices developed indicate that agricultural output in 1969 compared with the 1968 level decreased by 2 percent in Western Europe, 1 percent in Eastern Europe, and 5

percent in the Soviet Union. Research work was initiated on grain supply/utilization tables for the countries of Eastern Europe.

3. Agricultural Economies and Trade--These studies describe the agricultural resources, the position of agriculture in the economy, the agricultural situation, agricultural policies, and agricultural trade--including major imports and exports and their significance to the United States--of the countries in Western Europe and the Communist areas. Research is underway on Spain, the United Kingdom, West Germany, and Romania.
4. Servicing Activities--Service activities include: (1) responding to requests from FAS, other USDA components, and other U.S. Government agencies for information and data; (2) servicing requests for information from trade organizations, private companies, researchers at educational institutions, news media, foreign officials, and individuals; (3) providing background briefing material for and/or participating in the briefing of USDA and other government officials, members of Congress, foreign officials, and other individuals; (4) serving on interdepartmental and ad hoc committees; and (5) reviewing and coordinating statements prepared by various U.S. Government personnel. In addition, the Communist Areas Analysis Section supplies FAS with data and estimates of agricultural production and trade in Communist countries which are normally provided by Attaches for other countries and coordinates the agricultural exchange program between the U.S., the USSR, and Romania.

Coordination of the U.S.-Soviet agricultural exchanges involves preparation of a program of visits of delegations and specialists to the USSR, in consultation with all agencies of USDA, cooperation with Department of State in negotiation and implementation of the exchanges, and other administrative matters related to these exchanges.

5. Future Work--The basic objectives of research in this area will remain largely unchanged. However, areas of research to be expanded in the coming months and years include: (1) country agricultural economy and trade studies; (2) Mainland China and Cuba; (3) trade patterns and changes in them, particularly in Communist countries; (4) producer and consumer prices of agricultural products; and (5) the impact of price and income changes on agricultural production, consumption, and trade in Communist countries.

F. Situation and Outlook, Africa and Middle East

1. Africa and Middle East Agricultural Situation (continuing project)--Total agricultural output in Africa for 1969 rose from an index of 124 in 1968 to 127 (1957-59 = 100). Agricultural production per person, however, just kept pace with population growth and stood at 97, the same as in 1968 but below the previous several years. While production was down in most countries of North, East, and Southern Africa, output was significantly higher in all other countries except Togo.

Middle East agricultural output was down moderately in 1969. The index of total agricultural production at 137 was 4 points below the level of the previous year, and only 1 point above the 1967 level. The index of

per capita agricultural production declined sharply to 102 while the index of per capita food production dropped five points to 100. All countries in the area, except Cyprus and Jordan, contributed to the decline.

2. Agricultural Production Indices (continuing project)--Indices of agricultural and food production for 39 countries in Africa and Middle East were completed and published during the fiscal year.
3. Improvement of Statistical Data (continuing project)--Work continued to progress in the preparation of country data books containing basic statistical records used in the analysis of agricultural developments and in the preparation of regularly-scheduled reports. The inadequacy of the basic statistics available for the countries of Africa and the Middle East makes this a major undertaking. In addition to the above, substantial work was devoted to the preparation of supply and utilization tables for the research commodities/countries of Africa and the Middle East.
4. Agricultural Economies in Brief--These studies are relatively short and are designed to provide timely information on the agricultural resources, production, policy and trade of the country. During the period under review, briefs were published for Turkey, Algeria, Congo, Upper Volta, and Malagasy Republic.
5. Agricultural Trade Tables--Agricultural trade tables are prepared and reproduced in quantities of 50 to 100 copies each year for countries of Africa and the Middle East. These are prepared when official Governmental trade documents become available. Trade data are converted from official country units and presented in units of metric tons and U.S. dollars. The tables are organized according to the Standard International Trade Classification (SITC) and show major countries of origin and destination.
6. Servicing Activities--The Situation and Outlook staff devotes considerable time to reviewing AID Country Field Submissions, preparing briefing papers for officials traveling or being assigned overseas and servicing requests of all kinds. Most of the service-type activities are in support of Foreign Agricultural Service activities.
7. Future Work--During FY 1971 the following will be initiated or completed: Revising the current publication on planting and harvesting seasons; research studies on agricultural development in Somalia, Kenya, Nigeria, and Tunisia; several country agricultural briefs; and a continuing review and analysis of the various EC-African Trade agreements and the impact on U.S. trade. It is not expected that there will be any unusual problems in reaching the objectives of this area of work. We will be faced with the usual lack of adequate data to prepare food supply/utilization tables for many of the countries. Preparation of indices of agricultural production to be published in FY 1971 will require more effort than usual because a new base period and new commodity price weights will be introduced.

G. Situation and Outlook, Far East and Oceania

1. Far East and Oceania Agricultural Situation (continuing project)--Published annual and midyear reviews of the 1969 situation and outlook for 1970. An article updating the situation and outlook, with emphasis on foreign trade, was prepared for the June 1, 1970 issue of Foreign Agriculture magazine.

In 1969, total agricultural production in the region reached an all time high. It exceeded the 1968 level in all but two countries--Japan and Australia, where it was slightly below the record levels of the previous year. The 1969 index of total agricultural production (as a percentage of production in 1957-59) ranged from a high of 190 in Thailand to a low of 112 in South Vietnam. On a per capita basis, agricultural production in 1969 was above 1957-59 in all but three countries--Burma, Indonesia, and South Vietnam.

Generally favorable weather accounts for part of the production gains registered in 1969. In addition, increased use of chemical fertilizers in every country, expanded irrigation, more multiple cropping, increased mechanization, and wider use of improved farming techniques contributed to the record outturn.

Total exports from Far East countries in 1968-69 reached \$26.2 billion, up 21 percent from the year before. Imports by countries of the region totaled \$29.8 billion, up 11 percent from the year before and maintaining the unfavorable trade balance that has persisted for many years. Food, beverages, and agricultural raw materials accounted for about 30 percent of both exports and imports.

U.S. exports to the Far East in 1969 totaled \$6.9 billion, up from \$6.5 billion in 1968. Farm product shipments were valued at \$2.0 billion, down from \$2.2 billion in 1968. Agricultural exports to Japan, the leading commercial market for U.S. agriculture, totaled \$934 million. Among the most important items were wheat, corn, grain sorghum, lemons, alfalfa meal, tobacco, cattle hides, soybeans, cotton, and tallow.

2. Agricultural Production Indices (continuing project)--Indices of agricultural and food production, both total and per capita, were calculated in the autumn for 15 countries from preliminary data for AID. In late winter they were recalculated from revised data for inclusion in the Far East and Oceania Agricultural Data Book.
3. Agricultural Data Book--In September 1969 the third annual Agricultural Data Book for the Far East and Oceania was published. The fourth issue will be released in November 1970. It provides current historical data on production and trade of agricultural products between countries of the region. These data are useful in reviewing the current agricultural situation and in analyzing trends in production and trade in agricultural products. They are utilized in market development, competition and projections studies. The value of U.S. trade in agricultural products, shown by their Standard International Trade Classification (SITC), is included in this publication to provide a more complete review of agricultural relations between the United States and the Far East countries.

Use of commodity groups common to all countries permits comparisons not otherwise possible.

4. Servicing Activities--The Situation and Outlook Staff provides servicing for other agencies of the Department of Agriculture (especially FAS), other government departments, and private agencies and companies as well as individuals. This includes the preparation of briefing papers to advise the Secretary and other officials as to the agricultural situation and outlook in specific countries and the development of information needed to formulate a Department position regarding policy issues. It includes the provision of information to private firms preparing to enter business in the Far East.
5. Future Work--Situation and Outlook will continue to receive primary emphasis in the work of the Branch. The annual Agricultural Situation and the annual Agricultural Data Book will be published each year. Food balances and supply utilization tables will be prepared for select countries of the region. Special studies underway in FY 1971 include a study of agricultural inputs in India; area, production and yield trends; the agriculture of South Asia; New Zealand's agricultural economy; Japan's agricultural economy; food consumption trends in the Far East; and land tenure in South Vietnam. Each of these studies will result in an ERS publication.

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- Willett, Joseph W. "The Impact of New Grain Varieties in Asia." Economic Research Service. ERS-Foreign 275, 28 pp., July 1969.
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Western Hemisphere

- "Western Hemisphere Agricultural Situation--1969 Midyear Review." ERS-Foreign 279, 8 pp., October 1969.
- "The Agricultural Situation in the Western Hemisphere--Review of 1969 and Outlook for 1970." ERS-Foreign 294, 27 pp., April 1970.
- "Indices of Agricultural Production for the Western Hemisphere (excluding the United States and Cuba)." ERS-Foreign 264, (Review), 31 pp., April 1970.
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"The Agricultural Situation in Communist Areas: Review of 1969 and Outlook for 1970." ERS-Foreign 292, 57 pp., April 1970.

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- Cohen, Marshall H. "Iceland Becomes EFTA's Eighth Member in March 1970." Foreign Agriculture, p. 7, April 5, 1970.
- Bernstein, Linda A. "Yugoslavia, EC Sign Baby Beef Agreement." Foreign Agriculture, pp. 5-6, May 4, 1970.
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Far East

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AREA NO. 2 -- DEMAND FOR AND COMPETITION WITH
U.S. AGRICULTURAL EXPORTS

OBJECTIVES

In many foreign markets United States farm products are facing a change in the competition or demand situation that directly affects their sales. There is a growing volume of requests for information on foreign competition and demand arising from political and economic developments abroad. The problem is to provide an appraisal of developments by country and region in agriculture and in the overall economies of foreign countries in order that American farmers, agricultural export interests and governmental agencies may take advantage of opportunities for developing new and maintaining or expanding existing foreign markets for U.S. farm products.

Objectives in this area include analyses of:

- (1) Trends in demand, supply and trade of farm products within our major markets; growth of population and income; financial and trade policies which affect agricultural trade; effects of changes in marketing consumption, prices, stockpiling and trade patterns on U.S. farm exports.
- (2) Agricultural developments within countries which are major competitors with the United States in world agricultural markets; changing production and trade patterns caused by rising productivity and adjustments in cost-price relationships; market organization and export promotion; and other measures which encourage agricultural production and trade.
- (3) World production of and trade in agricultural commodities. Data are maintained for commodity groups in a program of continuing commodity analysis relating to foreign market demand and world food and fiber needs. Such data also supply the basis for projection work of the Division.
- (4) Agricultural developments in the less developed countries, particularly as they relate to requirements for food.

USDA PROGRESS

A. Foreign Competition and Demand, Western Hemisphere

1. Canada--A statistical report on "Trends in Canada's Agricultural Trade and Production, 1959-69," was completed and submitted for publication. This report provides a statistical review of Canada's role during the past decade as a supplier of agricultural commodities competing with U.S. agricultural commodities. Trade, production, consumption, farm resources and inputs, and grain marketing patterns for relevant agricultural commodities are treated. In 1959-69, wheat and flour dominated Canada's agricultural exports, but tobacco, barley, flaxseed, rapeseed, animal feed, meat, and live cattle were also important. The Prairie Provinces led in crop production--especially grains and oilseeds.

A second report now under preparation is an analytical study of the aspects of Canadian trade, production and marketing, which makes it a competitor of the United States in foreign and North American markets. Commodities under analysis include Prairie grains and oilseeds, Ontario corn and soybeans, livestock products, tobacco, and fruits and vegetables.

2. Colombia Coffee Diversification Program--Analysis of this six-year pilot project indicated some progress in diversifying agriculture in the important coffee zone. The primary objectives of the program are to improve the agricultural economy of the area, reduce its heavy dependence upon coffee and to expand supplies of food crops and livestock products.
3. Economic Integration and Trade Blocs (continuing project)--The Latin American Free Trade Association (LAFTA), after getting behind in its time-table of trade concessions, amended the agreement to extend the goal of free trade from the original date of 1973 to 1980. The Central American Common Market (CACM) is struggling to make progress again after the hostility between El Salvador and Honduras. Major problems are the location of industries and the balancing of intra-regional trade. The most promising integration effort at present in Latin America is the new Andean group, a sub-regional association under LAFTA. The establishing agreement ratified by the five participating Andean nations pledged abolition of all internal tariffs within 11 years and adoption of a common external tariff. The Caribbean Free Trade Association (CARIFTA) is making progress, with further lowering of tariffs on some items. Some servicing to FAS and other ERS divisions also occurs in this sub-area of work.
4. Servicing Activities--The Demand and Competition Group provides services at various levels within the Department of Agriculture in the formulation of recommendations in reference to agricultural policy and programs, and their relation to U.S. agriculture from the standpoint of demand and competition. The Group's continuing commodity analysis work on cotton provides support for servicing intra-department requests relative to current demand-competition and projections for the future.
5. Future Work--In addition to the uncompleted or continuing projects noted above, a new project was begun which analyzes Latin America's changing

trade and trade patterns, including source and direction of trade. New projects under consideration include: (1) weather-crop yield analysis in Latin America; (2) effects of commodity prices on production and trade; (3) implications for U.S.-Latin American trade of generalized trade preferences for LDC's.

B. Foreign Competition and Demand, Europe and Soviet Union

1. French and German Grain Policies--A contract with Stanford Food Research Institute provides for the supplying of information on trends in grain production and utilization in France and West Germany and the appraisal of the effects of Common Market agricultural policies on future grain production and trade in these countries. Publications under this contract are "French and EEC Grain Policies and Their Price Effects, 1920-1970," and "The West German Grain Economy and the Common Market: Policies, Prices, and Production, 1925-1975." An additional publication on France, incorporating the above publication and a short study on "The Changing Structure of French Agriculture and the Outlook for Grain Production in the 1970's" is forthcoming.
2. Livestock-Feed Balances for Selected West European Countries--This cooperative research agreement with Cornell University resulted in publication of livestock-feed balances for the United Kingdom, the Netherlands, West Germany, Italy, France, Belgium, and Denmark. Data are presented on livestock concentrate requirements (including feeding rates), domestic production of concentrates, and imports of concentrates for use in the short-term forecasting of concentrate requirements.
3. The Mixed Feed Industry of the Netherlands and its Impact on the Use of Grain for Feed--The report prepared under this project examines the decline in the use of grain in mixed feeds in the Netherlands despite industry expansion and rising livestock numbers. Ingredients being substituted for grain are identified and the structure of the mixed feed industry is outlined. Future implications for the whole of the EEC are discussed.
4. Methodology for Forecasting Livestock Numbers in Selected West European Countries--A contract in effect with the Institut für Landwirtschaftliche Marktlehre, Hohenheim, Federal Republic of Germany, provides for the development of a methodology for forecasting livestock numbers on a year-to-year basis for cattle, swine, poultry, and minor livestock species in the Federal Republic of Germany, the United Kingdom, the Netherlands, and Denmark for use in forecasting animal feed requirements. Report is in the process of publication.
5. The Marketing System in Selected West European Countries--A contract in effect with the IFO-Institut für Wirtschaftsforschung, Munich, FRG, provides for a comprehensive survey of the structure and functioning of marketing systems for grains, feedstuffs, beef and pork, poultry, and fruits and vegetables in West Germany, France, Italy, the Netherlands, Belgium-Luxembourg, the United Kingdom, Denmark, Norway, Portugal, Sweden, Switzerland, and Austria. Draft reports for West Germany, the Netherlands, and France have been received.

6. Survey of Literature on the Feed-Livestock Complex of Netherlands, Belgium-Luxembourg, Spain, Denmark, and the United Kingdom--This study, completed by ERS for the Foreign Agricultural Service, surveys the literature available on 12 related topics including livestock numbers, nutritional standards, substitution between feeds, grain use by class of livestock, income and price elasticities, and market structure and marketing margins. Reports were prepared for internal use in FAS.
7. Use of Wheat for Feed in the European Economic Community--Agricultural policies pursued by the EEC have resulted in significant surpluses of soft wheat. Although some wheat is fed directly on farms, a large tonnage must be exported or denatured for feed at a high cost. Wheat denaturing regulations have evolved from a position of extreme caution to one of generous subsidization. Little information is available on attitudes of feeders concerning the use of wheat for feed in the EEC. Further adjustments in the EEC's wheat/coarse grain price ratio which better reflect relative feed values are expected. A draft report is near completion.
8. Marketing Profiles on Selected West European Countries--These profiles, requested by the Foreign Agricultural Service, were prepared on Belgium, France, West Germany, Italy, the Netherlands, the United Kingdom, Spain, Sweden, and Switzerland. The marketing profiles outline the general economic situation, market conditions and outlook and their impact on U.S. agricultural exports, agricultural trade, commodities with good and limited market potential, tariffs and trade policies, and marketing practices and facilities.
9. Eastern Europe's Agricultural Development and Trade--Long-term output trends show substantial growth in agricultural output for Eastern Europe. Wheat has made the strongest gains among the field crops. Gains in livestock output are related to the increased use of wheat for feed. Higher incomes and shifts in consumer demands have led to increased imports of vegetable oils, cotton, fruits, and tobacco. Trade for the area also shows that agricultural exports have increased faster than imports, but the import demand for Czechoslovakia and East Germany is still high. U.S. agricultural exports to the area have moved downward since 1964.
10. Servicing Activities--The Demand and Competition Section has prepared various articles, speeches, and reports relating developments in Western Europe to the prospects for U.S. agricultural trade. The impact of the EEC's common agricultural policy on consumers was also analyzed. Servicing on coarse grains and on developments in the European Community was provided to government officials, officials of private companies, college and university researchers, and members of the press.
11. Future Work--General objectives of this area of analysis will remain largely unchanged. Consideration is being given to examining the potential for increased corn production in selected countries of Western Europe. A survey of EC literature on agriculture is in process. Results of this project will be available for use by USDA and other officials.

C. Foreign Competition and Demand, Africa and Middle East

1. Location and Evaluation of Research on the Agricultural Economics of the French, English and Portuguese Speaking Countries of Africa--During the period under review, the contractor completed all work under this contract. The contractor located 1,350 studies on certain aspects of agricultural economics of the French, English, and Portuguese speaking countries of Africa. The contractor prepared annotations for all reports located and prepared some 15 extended summaries of reports which were selected as of being of particular interest to the USDA. When available, copies of the studies located were obtained by the contractor and forwarded to the USDA. Copies of some 200 studies were received. Most of these studies have been forwarded to the National Agricultural Library. As specified in the contract as amended, the contractor prepared and published an annotated bibliography of all the studies located. One thousand copies of the bibliography were forwarded to the USDA.
2. African Agricultural Information Recovery--Work under this contract was completed during the period under review. The contractor referenced over 600 books, documents, research studies, other publications, researchers, experts, institutions and organizations which specialized in African agriculture. The contractor prepared brief summaries of each book, report or document and pertinent information on researchers, institutions, and so forth, on cards suitable for the type of card file system already employed in the Foreign Regional Analysis Division. Where possible, the contractor noted the availability of the various studies or books.
3. Servicing Activities--The major service type activities related to this area of work are providing information to support the market development activities and commodity problems of the Foreign Agricultural Service and to provide the various trade groups with information pertinent to the expansion of U.S. exports.
4. Future Work--During FY 1971, work will be initiated on the following research: an analysis of the impact of irrigation on agricultural development with implications for the future for selected countries of the Middle East; development of a short-run weather-crop yield analysis system for the Anatolian Plateau of Turkey; agricultural development in Tunisia and the problems and prospects for future agricultural growth and the impact on trade. In carrying out research in the area of competition and demand, there are numerous problems in reaching the objectives. The most important is the lack of adequate data. Another consideration which bear heavily on the work to be undertaken is a clearer definition of the research problem and needs of the end-user. This area of work will be given increasing emphasis during the current year.

D. Foreign Competition and Demand, Far East and Oceania

1. Japan's Farm Commodity Market--A View of U.S.-Australian Competition--The United States has long been Japan's major supplier of agricultural products, and the value of this trade has increased almost steadily. Although Japan's market for agricultural products continues to expand,

the U.S. share of that market has recently declined because of strong competition from other countries, particularly Australia. In 1968, the United States supplied 30 percent of Japan's imports of agricultural commodities--a decline from 34 percent in 1965. The most important U.S. exports of agricultural commodities to Japan, which in 1968 were valued at \$932 million, are soybeans, cotton, wheat, feed grains, tobacco, cattle hides, and tallow.

Australia has a rising agricultural production and an economy which has always been oriented toward the export market. Technological advances and development of new lands have brought expanding production in Australia, and increasing attention is being given to market development and diversification. With Australia's trade directions shifting from Western Europe to the Far East, Japan has become the Commonwealth's largest market for farm products. Australia is making strong promotional efforts to broaden its place in that market. In 1968-69, Australia's agricultural exports to Japan were valued at \$467.1 million. Chief among these exports were wool and wheat, but Japan is also Australia's best market for cheese, casein, barley, and cattle hides. Australia has a growing capability of filling a much larger share of the Japanese market than in the past and can be expected to become increasingly competitive with the United States in that market.

2. Japanese Efforts to Diversify Sources of Agricultural Imports--Japan has developed a long-term policy of diversifying sources of its farm product imports to hedge against supplies from major sources being reduced or shut off, and to encourage other countries to purchase more of its industrial products. Programs have been initiated for actively helping developing countries, particularly those in Southeast Asia, increase their agricultural production. Emphasis is being placed on producing the farm commodities that Japan needs to import and helping recipient countries attain self-sufficiency in food production. The policy is implemented primarily through Japan's foreign aid programs. The Government of Japan and private Japanese enterprise actively participate and cooperate in carrying out overseas development projects. Increased production of farm products for export to Japan can thus be expected.

Volume increases will be small for the next year or two but will grow more rapidly thereafter. By 1975, the competitive effect of the overseas development projects just starting can be expected to reach significant levels in Japanese markets for a few American farm products.

It seems reasonable to expect that by 1975, Southeast Asia will be exporting 1.5 million to 2.0 million metric tons of corn to Japan, and between 200,000 and 300,000 tons of grain sorghum may be moving from Australia to Japan. Exports from Southeast Asia to Japan of dried cassava for use in mixed feeds will probably be many times the 1967 level of only some 10,000 tons. Oilseeds may eventually represent a major item of trade, but until the mid-1970's, it seems unlikely that oilseed production in Southeast Asia will expand to a point where it will have a significant impact on the Japanese market. A very substantial increase in exports of South and Southeast Asian tropical fruits and fruit products to Japan can be expected by 1975. There should be

a large increase in exports of raw silk from Southeast Asia. Exports of cotton and tobacco from South Asia are expected to increase by 1975.

3. Thailand's Role in Determining World Rice Prices--Thailand is second only to the United States as an exporter of rice. Many experts consider that Thailand's rice situation is the major factor determining "world prices" for both long and medium grain rice. Therefore, the rice price situation in Thailand has major implications for U.S. producers, as exports normally account for about 60 percent of the U.S. production of this commodity. The study aims at determining a quantitative measure of the influence of Thailand on international rice prices and analyzing the implications for U.S. export prospects.

This study will be completed and published in FY 1972.

4. Servicing Activities--Requests for policy oriented studies on a multi-country basis in the field of demand and competition come from the Office of the Secretary, the Assistant Secretary for International Affairs and Commodity Programs, the Administrators of ERS and FAS, and others. Usually such request are to meet specific immediate policy needs within the Department of Agriculture.
5. Future Work--A comparison will be made of the pattern of Thai rice trade over the last decade with U.S. exports by country of destination. It will include an analysis of the effects of the "Green Revolution" on Thailand's competitive position.

A project in the planning stage is a study of tourism and market opportunities for imported farm products in the South Pacific Islands. Tourism is a rapidly growing business in this region. Year-to-year gains of 30 percent to 50 percent are quite common for a growing number of locations. All tourist centers are highly dependent upon imported foodstuffs and other items of agricultural origin to take care of the needs of their temporary visitors.

A major objective of this study will be to determine current and probable future market opportunities for imported foodstuffs and other items of agricultural origin for selected rapidly growing South Pacific Island tourist centers, and to determine means by which these potential markets can best be developed. It is intended to provide guidance to American export interests in developing or expanding their sales in the specific markets studied, in other tourist centers in the region, and around the world. Emphasis will be placed on prospective growth and changes in demands over the next five to ten years.

During FY 1970 analysts of the Foreign Regional Analysis Division undertook a special contract study for the Asian Development Bank; a study of the impact of the development of new agricultural technology (the "Green Revolution") on Southeast Asia in the 1970's. Out of this project and other research carried on in FRAD, major new lines of research have been developed for work on Southeast Asia. Research will be undertaken, depending upon time and funding, on the problem of adaptation to and adoption of new technology in agriculture, problems of intraregional

trade, diversification of agricultural production, the employment and distribution affects of new agricultural technology, and the agricultural growth potential and intraregional trade implications of the development of the Mekong Basin. Depending upon the scope and timing of specific research, personnel of the Far East Branch will be used in conjunction with other personnel in FRAD in these research areas.

PUBLICATIONS REPORTING RESULTS OF USDA RESEARCH

Western Hemisphere

Hopkins, John A. "The Latin American Farmer." ERS-Foreign 257, 138 pp., August 1969.

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Europe and Soviet Union

Pearson, William E. and Friend, Reed E. "The Netherlands' Mixed Feed Industry-- Its Impact on Use of Grain for Feed." ERS-Foreign 287, 43 pp., May 1970.

Bickley, Lynn S. and Schoonover, David M. "Growth Potential in Romanian Agriculture." Foreign Agriculture, pp. 7-8, October 13, 1969.

Lopes, James. "Agriculture in Spain's Second Plan." Foreign Agriculture, pp. 13-14, December 8, 1969.

Cohen, Marshall H. and Phillips, Donald M. "The Common Market: A Review and a Look at the Problems Ahead." Foreign Agriculture, pp. 2-5, January 12, 1970.

"Soviet Sunflowers in the Sixties and a Look at the Seventies." (unnumbered), 9 pp., February 1970.

Africa and Middle East

Kurtzig, Michael E. "Israel's New Export--Winter Strawberries for Europe," Foreign Agriculture, Vol. VII, No. 27, pp. 6-7, July 7, 1969.

Warren, Cline J. "The High Aswan Dam and New Trends in Egyptian Agriculture." Foreign Agriculture, Vol. VII, No. 28, pp. 2-4, July 14, 1969.

Singleton, Carey B., Jr. "Agriculture in Tanzania's Development." Foreign Agriculture, Vol. VII, No. 31, pp. 6-8, August 4, 1969.

Treakle, H. Charles. "Syria Dams the Euphrates--Plans Giant Drought for Crop-land." Foreign Agriculture, Vol. VIII, No. 3, pp. 8-10, January 19, 1970.

Kurtzig, Michael E. "Weather Mars Middle East Wheat Prospects." Foreign Agriculture, Vol. VIII, No. 26, p. 7, June 29, 1970.

Far East

- Abbott, Geraldine W. "Japan's Farm Commodity Market with Emphasis on Australia's Competition with the United States. ERS-Foreign 289, 32 pp., March 1970.
- Pike, Clarence E. "Japanese Efforts to Diversify Sources of Agricultural Imports." ERS-Foreign 297, 23 pp., April 1970.
- Long, Mary Ellen. "Trends in Australia's Agricultural Trade." Foreign Agriculture, pp. 16-18, February 23, 1970.
- Parker, John B. "Afghanistan's Fruit Exports are Expanding." Foreign Agriculture, p. 7, March 23, 1970.
- Pike, Clarence E. "Agriculture in the Far East and Oceania--Production, Trade and Consumption Trends." Foreign Agriculture, pp. 3-5, June 1, 1970

AREA NO. 3 -- LONG-RANGE OUTLOOK FOR U.S. AGRICULTURAL EXPORTS

PROBLEM

Knowledge of supply and demand trends and import requirements in foreign countries and the location of new opportunities for U.S. farm exports is essential if the United States is to develop its farm exports to the fullest extent consistent with the economic utilization of U.S. agricultural resources. The United States must also harness its productive capacity to meet world food needs efficiently without recurring cyclical shortages and surpluses.

The objectives in this area include:

- (1) Periodic appraisals of world food needs by countries and major subregions of the world for use in special studies for administrators, other agencies, task forces and other requestors. This also involves making estimates to 1975 and 1980.
- (2) Make annual projections of exports of leading U.S. agricultural commodities by quantity and value.
- (3) Contracting with competent research organizations for comprehensive country studies to analyze and project to 1975, 1980, and 1985, the import demand and export availability of agricultural products which are important U.S. export commodities. The Division plans, supervises and reviews the studies at different stages of development. The results of these country studies are integrated into our regular projections work for major regions and for the world.
- (4) Projecting immediate and long-term world demand prospects for products exported by less developed countries. This ERS research for AID is being done in cooperation with the Foreign Development and Trade Division.

PROGRESS IN USDA AND FOREIGN RESEARCH CONTRACTORS' PROGRAM

- A. World Food Needs by Country and Region--Direct work under this project was limited. However, work under objective item (4) above provided considerable material for appraising the capability of the world to produce enough food to sustain the rapid growth in population and to supply a satisfactory level of consumption in the developing world. Special emphasis was given to assess the impact of technology on production in the developing world and on the prospective world supply-demand balance for wheat, rice and coarse grains to 1980. If proper incentives such as high producer price, etc. continue to prevail, substantial growth in production of these grains is projected. This could lead to domestic surpluses and difficulty in maintaining prices because of lack of export outlets at prevailing prices. Changes in dietary patterns to include more animal protein could be a strong offsetting factor and absorb the increasing output of grain. However, prospects for rapidly developing a livestock economy in some developing countries may be slow. The likely development would come in large urban centers. Thus, increased use of domestic grains for livestock feeding would also require considerable effort to improve the internal marketing and distribution system.
- B. Projection of Exports of U.S. Farm Commodities--Analysis of long-run prospects of agricultural exports consists of relating U.S. exports to the commercial import demand in the developed countries, the export supplies of exporting countries, the food situation of the developing countries, and the growth potential of new commercial markets. Special studies were made relating to the supply, trade and demand prospects for wheat, feed grains, rice, cotton, soybeans, and oils for the major markets and were integrated into a world framework to measure the total impact on U.S. exports of these commodities over the next five years and to 1981. Substantial growth in demand can be expected as income and affluency continue to rise in the major import markets. However, continued high price policies in some of these markets, for example high grain prices in EC, will tend to limit expansion possibilities. U.S. exports of feed grains are expected to resume an upward trend in the decade of the 1970's after stagnating in the late 1960's. U.S. exports of soybeans are projected to increase substantially but with the demand for oilcake rising faster than the demand for oils, pressure on prices of oil will continue as will the need for concessional sales of oil. Only modest improvement in U.S. exports of wheat from the low's of the late 1960's can be expected as world demand prospects are only fair. The world outlook for rice is poor but U.S. exports of rice are expected to improve somewhat. Increased competition from new suppliers and increased supplies from traditional competitors will make it difficult for the U.S. to maintain its share of the world market for feed grains, wheat, and cotton in the 1970's. Further contribution were made concerning sets of projections under several alternatives for several commodities for the next five years and 1980 as part of an overall ERS study on projections. Results concerning prospects for U.S. exports were also disseminated in several speeches before trade organizations and other groups.
- C. Long-term Projections of Foreign Supply of and Demand for Agricultural Products by Country, Region, and for the World--Utilizing Section 104 b (1),

Title I, P.L. 480 funds, basic country studies are carried out under contract by research organizations with adequate facilities and familiarity with the problems to be studied. The contractor is usually an organization in the country being studied. Work included development of plans of work in cooperation with the contractor for studies initiated during the current reporting period. These plans aid in keeping the various country studies in line with the general framework previously developed.

Consultations on research and technical problems were held from time to time with research workers in the contracting agency. Required progress reports were reviewed and analyzed. Considerable time was spent in critical review and assistance in preparation of final drafts of these country studies. Cost of the studies varies widely, depending on the availability and reliability of data and the extent to which the data can be utilized for time series, cross-sectional and other projectional analysis. Time involved with studies varies from 18 to 36 months. Considerable time was also spent in evaluating these studies and in preparing summaries of them. This is reported under each separate study below.

As part of our continuing analysis of the supply and demand prospects, projections of production, consumption and trade to 1971-1976 and 1981 were made for wheat, rice, coarse grains, cotton and oilseeds and oils for the major countries and regions of the world. These projections were based on special analyses and on from individual country studies of long-term projections of foreign supply and demand. The import requirements (trade) determined from these studies for the major AID-recipient countries were helpful in evaluating future requirements of P.L. 480.

1. Studies published--7/1/69 to 6/30/70

- a. Central America--"Projections of Supply and Demand for Selected Agricultural Products in Central America through 1980." The contractor was the Battelle Memorial Institute of Columbus, Ohio. Dr. Odin Wilhelmy, Jr. first and then Dr. Ivan L. Kinne, subsequent Chiefs of the Agricultural and Food Economics and Information Research, were, in turn, Study Directors.

The report assumed a continuation of economic development trends for the region near recent levels, with gross national product to rise through 1980 at an annual rate slightly exceeding 5 percent. The growth rate implies some continued industrial and trade development under the Central American Common Market but the region is expected to continue strong dependence upon exports of cotton, coffee, bananas, and sugar. Increased demand was reflected in larger products, and eggs. The region is expected to remain largely self-sufficient in rice, pulses, tubers, and meat.

- b. Chile--"Demand and Supply Projections for Agricultural Products, 1965-1980." The contractor was the Economic Research Center, Department of Economic and Social Sciences, Catholic University of Chile, Santiago. The Project Director was Dr. Rolf Luders.

The population of Chile is projected to increase to 12.9 million in 1980 (annual rate of 2.6 percent). Per capita GNP is projected to grow from \$529 in 1965 to \$726 in 1980 (annual rate of 2.1 percent). Chile's supply-demand position in agricultural products is expected to improve in the case of grains, but imports of wheat will still be necessary. Imports of edible oils, potatoes, sugar, beef, milk, and milk products, animal fats and hides and skins are expected to increase considerably. Deficits are expected in mutton and lamb supply. The country will improve its exports of fruits, particularly of apples and pears, peaches, plums, and table grapes. Less vegetables and pulses may be available for export, except for dry beans which may become an export commodity. Chile is expected to be self-sufficient in other study commodities.

- c. Denmark--"Projections of Supply and Demand for Agricultural Products in Denmark (1970-1980)." The contract with the University of Aarhus, Aarhus, Denmark was signed in June 1965. Professor Vibe-Pedersen was Project Director. The final report was approved and has been published. Demand projections were based on both time series and cross-sectional analysis. Per capita demand for poultry meat, beef, eggs, cheese, fruit, vegetables, tobacco, and coffee are projected to rise significantly through 1980, while demand for pork and butter will increase only slightly. Per capita food consumption is projected to remain practically stable for margarine, as well as butter-fat in milk and ice cream, although population growth results in greater total consumption of both.

The projections of livestock output show declines from the 1966 level for milk, poultry and eggs, while sizable percentage increases are projected for pork and mutton and lamb. The pork supply projection indicates larger exports through 1980. However, reduced exports of dairy products, poultry meat, and eggs are projected. The findings also include self-sufficiency in grain around 1970, with a growing export supply in 1975 and 1980. However, a larger import requirement of oilcake and meal is projected by 1980.

Thus the study results imply that the country is likely to remain a good market for U.S. oilcake and meal, processed fruit and vegetables, and tobacco through 1980. The outlook for grain imports is quite pessimistic.

- d. European Economic Community--"Supply and Demand Projections for the European Economic Community" country studies. The contract with the IFO-Institut für Wirtschaftsforschung, Munich, Germany was signed June 19, 1967. The Project Director was Dr. Helmut Schmidt. The projections indicate the following changes in EC imports from 1965 to 1975: sharp increases in vegetable oils, oilmeal, fish and meat meal, beef and veal; a more moderate increase for grains; and declines for poultry and eggs. Larger export availabilities are projected for dairy products, pork, and potatoes; a smaller export availability of sugar is foreseen.

These changes reflect significant changes in per capita food demand. Some of the most important are: continued decline in demand for starchy foods; sizable increases in meat--especially poultry--consumption, as well as that of fats and oils; decline in fluid milk consumption but a rise in cheese. The changes in import requirements also reflect sharp increases in livestock output, requiring large increases in the total feed supply. The output of grain, sugar, and fats and oils is projected to be sharply higher.

- e. United Kingdom--"Projected Level of Demand, Supply, and Imports of Agricultural Products, 1970, 1975, and 1980." The contractor was the Institute for Research in Agricultural Economics, University of Oxford, Oxford, England; Colin Clark was Director.

The projections for 1975 were based on three assumptions: (1) a continuation of present policies; (2) a change to tariff support policies; and (3) entry into the EEC. For all alternatives, an increase was projected from the base period (1959-63) for imports of lard, oilcake, fish and meat meal, pulses and nuts, fruits and vegetables, and tobacco, but a decline was projected for wheat, feed grains, and beef.

Under existing policies, increases in U.K. net imports were projected for pork, lamb, milk and milk products, animal fats and oils, oilcake, protein meal, sugar, pulses and nuts, fruits, vegetables, and tobacco. Imports of beef, vegetable oils, and oilseeds were projected to decline. With tariff support policies, projected imports (1975) were generally lower than under the policy continuation alternative. The overall level of imports under the EEC entry alternative was the lowest, because of expected declines of beef, milk and milk products, lard, sugar, wheat, feed grains, citrus, and other fruit. The value index of projected net imports for 1975 (at base period prices) was 105.6 for the policy continuation alternative, 104.0 for "tariff support," and 100.6 for EEC entry.

- f. Korea--"An Analysis of Food Consumption in the Republic of Korea." A contract for this study was signed January 17, 1966 with Yonsei University, Seoul, Korea. The Project Directors were Drs. Ki Hyuk Pak and Kee Chun Han. This contract was terminated in 1968 upon receipt of a final report from the contractor. To refine data in the report and provide for publication thereafter, a further contract was signed June 24, 1969. Work under this contract and publication of the final report was completed in FY 1970.

The demand for agricultural products in South Korea is increasing rapidly due to growth in population, income, and industrial development. Shortages of food and agricultural raw materials are being filled by imports. The value and volume of aggregate demand is increasing, and the pattern of demand is changing due to urbanization and industrial development.

The study also shows that industrialization is producing a significant population shift from rural to urban areas. The percentage of

urban population is expected to increase from 29.3 percent in 1961 to 39.3 percent in 1971. Total population is increasing, but at a slower rate--from 2.8 percent in 1964 to 2.4 in 1968 and the rate of increase may decline to 2.3 by 1971.

The nation's total expenditure for food is expected to register an average annual growth rate of 6.5 percent. Urban food expenditures are shown to be growing at 9.1 percent annually, in contrast to 4.8 percent for rural areas. The future demand for grains shows the same pattern as that for all food. A relatively high growth rate of 7.9 percent is shown for rice for urban areas, and 4.7 percent for rural areas.

Of the nongrain goods, the highest growth rate is shown for eggs and milk, 14.6 percent per year. Fruits ranked next with demand increasing more than 11 percent annually. Demand for processed foods, meats and fish, vegetables, seaweeds and condiments is growing rapidly. When matched with the Korean Government's official estimates of production, the study's estimates of future food needs reflect a growing import requirement for food, especially rice, wheat and millet.

- g. Hong Kong--"Long-Term Economic and Agricultural Commodity Projections for Hong Kong, 1970, 1975, and 1980." The contractor was the Economic Research Centre, Chinese University of Hong Kong. Project Directors were Drs. Anthony M. Tang and K. R. Chou.

The findings indicate that although food expenditure as a percentage of gross domestic product is projected to fall from 18 percent in 1964 to 15 percent in 1980, the slowly rising food production is not expected to keep pace with the more rapid rise in demand. Thus, the self-sufficiency ratio is projected to fall from 20 percent in 1963 to 16 percent by 1980. As a result, the expanding net import requirement is expected to reach \$3.2 million by 1980, about 115 percent over 1964. This rise in import demand for 1980 will represent an increase of over 65 percent for rice, peanuts, soybeans and vegetable oils; approximate an increase of 110 percent for wheat flour and for lard and tallow; and an increase ranging between 140 and 175 percent for the imports of wheat, vegetables, fruits, meats, and dairy products (1962-64 base period).

2. Studies completed--7/1/69 to 6/30/70

- a. Argentina--"Long-Term Projections of Supply and Demand for Selected Agricultural Products." The contract with the Instituto Nacional de la Tecnologia Agropecuaria (INTA) of Buenos Aires was signed on April 18, 1966. Dr. Wylían R. Otrera was the Study Director until 1968, when he moved to a new position, and Dr. Humberto Pereira took his place. The final study report was submitted and accepted and is at present being revised for publication. A summary report on the study is also being prepared.

The study assumes population growth through 1980 at the rate of 1.4 percent per annum and a moderate rate of economic growth reflected

in the increase in the net national income at between 2 and 3.5 percent per annum.

The projections show increased export availabilities of wheat and feed grains, cattle hides, vegetable oils, cheese and powdered milk, fruits (with the exception of pears) and fruit products, and tobacco. Exports of beef, mutton and lamb, and eggs will probably maintain at the level of mid-1960's, but exports of pork, sheep skins, and hides, wool, butter, casein and pears are expected to decline. These stable or declining export levels reflect increases in domestic per capita demand. Argentine exports of cotton will probably disappear and by 1980 the country may have to import up to 22,000 metric tons of this commodity. Imports of hops will grow three times the level of the 1960's.

- b. Taiwan--"Long-Term Projections of Supply, Demand and Trade for Selected Agricultural Products in Taiwan." The contract with the Research Institute of Agricultural Economics, College of Agriculture, National Taiwan University, Taipei was signed March 31, 1967. The Project Director was Dr. Te Tsui Chang, Professor and Director of the Institute of Agricultural Economics. The final study report is in the hands of a printer in Taiwan and should be ready for distribution before the end of calendar year 1970.

A continuing strong export position is indicated for Taiwan, however, the export pattern is projected to change with a significant drop in exports of rice and sugar. Sizable increases in exports of fruits, vegetables, eggs and cotton goods are projected. Imports of wheat, corn, soybeans, tobacco and milk products will expand rapidly. Imports of tallow are expected to decline but peanuts will become an import commodity. The findings of the study indicate continuing increases in the supply of fruit and vegetables for the U.S. market, thus increasing the competition with U.S. domestic producers. However, prospects are good for a growing market in Taiwan for many U.S. agricultural exports.

3. Studies in Progress

- a. Iran--"Long-Term Projections of the Supply of and Demand for Selected Agricultural Products." During the period under review, the final report was received. This report estimates Iran's future import requirements and export availabilities through 1980 for a large number of agricultural products. Demand projections, based largely on household survey data, are developed for Iran, nine major cities, plus the rural sector, and are then aggregated. The population of the country is projected to increase at an annual rate of 3.0 percent through 1980 while disposable income is projected to increase by 5.2 percent per year. The production projections include detailed estimates of production from the large irrigation projects underway in the country. Iran is projected to be an importer of wheat, minor grains, vegetable oils, and most animal products through 1980, but an exporter of rice, barley, cotton, and a number of fruits and vegetables.

- b. Nigeria--"Long-Term Projections of the Supply of and Demand for Agricultural Products." During the period under review the contractor was advised to proceed with the completion of the study as quickly as possible since it did not appear that the civil disorders were going to end in the near future. Although no progress was reported during this period, we were advised that the final report was nearing completion.
- c. United Arab Republic (Egypt)--"Long-Term Projections of Supply of and Demand for Agricultural Products." During the period under review, the study was discussed with the contractor. The contractor indicated that much of the work had already been completed in line with the revised Plan of Work and that it would be forwarded to the appropriate ministry for clearance during the fiscal year. Under the revised Plan of Work, no progress reports are required.
- d. Thailand--"Effects of Urbanization on Demand for Agricultural Products in Thailand." The contract was signed June 16, 1969 with Experience, Incorporated, Minneapolis, Minnesota. The Project Director was Mr. Allan Moore, Senior Vice President. The contractor's final draft report was received in September 1970.

The principal objective of this research study was to determine the effects of urbanization on the consumption of agricultural products in Thailand including other effects such as socio-economic trends, cultural changes, economic changes and policy changes. A secondary objective was to develop a mathematical model which would explain these relationships. The study was limited to Thailand but the model is also applicable to other countries.

The following is indicated by the study:

1. Urban residents consume fewer calories and more protein than rural residents.
2. Urban residents consume less rice and cereals and more meat, fish, fats and oils, and vegetables than rural residents as measured by per capita consumption and expenditures.
3. Although there were exceptions, the income elasticity of expenditures for food appear to be lower for urban residents than for rural residents.

It appears that there will be shortages in the protein foods during the next half decade, primarily of pork, beef, poultry, eggs, milk and fish. Fruits, vegetables, and sugar may also be in short supply if the past rate of production is not improved. Although Thailand has protected most of these commodities with high import duties, there seems not to be any great effort to increase production. It would appear that these products areas represent the major potential for U.S. exports to Thailand.

4. Studies for which Implications for U.S. Agriculture have been Analyzed

- a. Australia--"Long-Term Projections of Agricultural Supply and Demand, Australia, 1965 and 1980." This study was largely concerned with production, consumption, and marketing of agricultural commodities competitive with U.S. farm products. Wool also was included because of its great importance to the Australian agricultural complex.

Alternative projections of production, domestic consumption and export marketings of the individual commodities are presented as "high," "low," and "median" or "most likely". The median projection for wheat production in 1975 is 13.6 million metric tons with an estimated 10.8 million tons available for export. Paddy rice production is projected to reach 315,000 tons by 1980. Most of this will be available for export. Meat production will continue to rise. Exports of beef and veal are projected to increase steadily at slightly over 4 percent per annum during the early 1970's through the early 1980's. However, Australia is projected to be on an import basis for lamb before 1980. The study projects an increase in supply of and export of dried vine fruits, canned fruits, and cotton. Imports of leaf tobacco, Australia's most important agricultural import from the United States, is expected to remain around 13,000 tons into the 1970's and gradually decline to 11,000 tons by 1980.

- b. Hong Kong--"Hong Kong's Expanding Agricultural Imports-Projections to 1980." This report summarizes findings of a comprehensive study conducted at the Economic Research Centre, Chinese University of Hong Kong.

Projections of requirements through 1980 show that Hong Kong's agricultural production will be increasingly unable to meet future expected needs. The Crown Colony's already declining ability to provide its own food will be further aggravated by an increasing population, higher per capita consumption rates, and a great lack of arable land.

Thus, the Colony's self-sufficiency ratio (ability to provide own needs) is expected to drop from 20 percent in 1963 to 16 percent by 1980. As a result, net food import requirements will reach U.S. \$569 million (1964 prices) by 1980--an increase of 115 percent over 1964. Using 1962-64 as a base period, the projections indicate the following anticipated increased demand for specific commodities in 1980: rice, peanuts, soybeans, and vegetable oils--up 65 percent; wheat flour, lard, and tallow--up 110 percent; wheat, vegetables, fruits, meats, and dairy products--up 140-170 percent.

Higher per capita consumption rates account for much of the anticipated greater demand. Per capita consumption of rice, peanuts, soybeans, and vegetable oils is expected to increase by over 21 percent; lard and tallow, 37 percent; fruits and vegetables, 66 percent; and meats and dairy products, 75 percent.

The traditionally strong position of the United States in satisfying Hong Kong's food needs is expected to continue, but the role of Mainland China as a food supplier may grow in importance.

- c. Chile--Supply and demand projections for Chile indicate that the country has the potential of becoming largely self-sufficient in agricultural production. It can also develop substantial new agricultural exports in addition to fruit exports. Both potentials, however, seem unlikely to be fulfilled significantly in the projected period. The chief obstacles to self-sufficiency are insufficient capital available on the farm level, an inadequate road network which restricts the produce market, government price policies, and uncertainty regarding land ownership which has accompanied the land reform now in progress. Some important improvements have been made in farming practices, but to change the situation substantially it will be necessary to offer new incentives to the farmers and to develop better marketing facilities.

The Latin American Free Trade Association agreements will tend to restrict imports of agricultural commodities from outside the region. However, the implementation of the agreements seems necessarily to be a slow process. Hence, Chile will probably remain a market for such U.S. exports as wheat, milk products, tobacco, prepared meats, edible oils, and breeding animals. The United States will continue to import from Chile fruits and vegetables, such as table grapes, melons, pears, onions, and garlic. But efforts will be made in Chile to further diversify its markets and sources of supply.

- 5. Servicing Activities--A concerted effort was made in servicing of the Planning, Evaluation, and Programing staff, Agency for International Development, Economic and Statistical Analysis Division, USDA, and Foreign Agriculture Organization in both planned work and spontaneous requests. In addition, information was provided private firms and other research organizations concerned with studies pertinent to world food needs.
- 6. Future Work--"Long-Term Projections of Supply, Demand, and Trade for Selected Agricultural Products in Indonesia." The contract for this study was signed between the U.S. Department of Agriculture and the Institute for Economic and Social Research, University of Indonesia, Djakarta on June 29, 1970. The Project Director is Dr. Rustam Didon, Director of the faculty of Economics. The principal objective of this research project is to project to 1985 Indonesia's import demand and export potential for selected agricultural commodities. Also to review agricultural developments that have shaped past production, consumption, and trade patterns. Principal import commodities included in this study are wheat and wheat flour, rice, cotton, tobacco, milk, products, and tallow. Export commodities to be studied include rubber, spices, copra, palm oil, tea, coffee, and feed grains. The contract provides that the University of Indonesia will deliver a final draft report to the Economic Research Service by no later than July 1, 1972. This report will be in a form suitable for publication.

FRAD is currently undertaking an intensive review and evaluation of its long-range projections work. In June 1970, Robert R. Nathan Associates, Inc. completed and submitted to FRAD the results of its Evaluation of Studies of Supply and Demand of Agricultural Commodities in Foreign Countries. This study evaluates the long-range supply and demand studies carried out for FRAD, and contains numerous proposals and suggestions for future long-range research in the Division. Copies of this evaluation were circulated among major end-users, and consultations are being held with the authors of this evaluation, the major end-users and FRAD personnel to discuss future needs for, and future direction of, FRAD long-range research. Out of these discussions, new areas for long-range research are being developed.

D. Demand Prospects for Exports of Less Developed Countries

National development plans and programs in many less developed countries (LDC's) are strongly dependent upon the fortunes of their agricultural exports. Economic development of LDC's depends upon expanding foreign exchange requirements to pay for increased imports of goods, technical skills, and capital equipment. Since agricultural exports are the major source of foreign exchange earnings, there is growing concern that exports earnings will not keep pace with needs. Thus, for AID or other governmental agencies to give competent advice and assistance to the LDC's on agricultural development policies, a firm understanding of the entire demand structure for these agricultural commodities is necessary.

The major objective of the research project was to estimate the long-term world demand prospects for selected agricultural products exported by the less developed countries and to outline the implications of production and trade policies and programs on export earnings. Projections of long-term world demand and supply for certain agricultural exports of the LDC's were made under several economic and policy alternatives.

Analytical work on commodities assigned to FRAD has been completed. The cotton, rice and oilseeds manuscripts are in review and a draft of total grain, reporting on world grain trade model, is nearly completed.

General implications that can be drawn from the specific commodity projections are:

1. Supplies of most crops and fibers in 1980 appear likely to exceed demand at current prices. Prices are likely to decline, therefore, unless major producers adjust production.
2. Much of the increase in production of food and fiber in the LDC's would be absorbed by increases in domestic consumption.
3. The demand for agricultural imports by the LDC's may increase rapidly, particularly for commodities which they do not produce. The LDC's could account for an increasing share of world agricultural imports.
4. Increased LDC imports would in part be contingent on concessional sales of foods, feeds, and fibers.

5. Export earnings for commodities supplied only or principally by LDC's--such as tropical fruits and beverages--are expected to rise with projected income growth in importing countries under continuation of current price and export policies. If exports were increased relative to growth in demand, prices and export earnings would be reduced. Reduced exports relative to growth in demand, might raise prices and export earnings, but consumption of substitutes might rise, weakening the prospects for gains in earnings.
6. Less developed countries' earnings prospects for commodities supplied by both LDC and developed exporters can be drastically affected by the policies of the latter. One strategy for LDC's would be to increase exports to the point that major developed exporters might find it expedient to accommodate, possibly through some cooperative international effort.
7. LDC's may find it difficult to achieve a consensus on trade policy, since the less developed area includes both importers and exporters. Lower world prices benefiting importers would adversely affect exporters, and higher world prices benefiting exporters would adversely affect importers.

World demand prospects for specific commodities are:

1. World demand projections to 1980 indicate that wheat prospects are fair. Import demand is expected to be sluggish in developed areas, but stronger in the LDC's. Concessional terms of trade could further increase exports to the LDC's.
2. The outlook for rice is poor. Continuation of the "Green Revolution" would result in lower world import demand, a demand traditionally centered in the LDC's. Import demand in the developed area is expected to rise moderately, but the increase will be small relative to potential export supplies.
3. Demand prospects for coarse grains are good. Import demand in developed areas, particularly Japan, is expected to be strong. Import demand in the LDC's could increase sharply with a rapid expansion in the livestock industry, and the availability of concessional terms of trade.
4. Demand prospects are good for oilcake, but poor for vegetable oils. Import demand for oilcake should continue to be strong because of an expanding world livestock economy. For the developed area, very little growth in import demand for oil is projected. For less developed countries, any substantial increase in import demand for oils would be contingent on concessional sales.
5. Prospects are good for cotton textiles but fair for lint. The import demand is strong for textiles in the developed countries but weak for lint. The LDC's are expected to increase their consumption of both textiles and lint, but domestic demand for textiles could be weak if economic growth in these countries falters.

6. Value of exports in the LDC's for these products plus bananas, coffee, tea, and cocoa is projected to reach a level of \$10.7 billion in 1980, indicating an annual growth rate of 2 percent from the 1964-66 base period. At the same time, the projected value of imports for the same commodities--\$6.7 billion--represents an increase of 3 percent a year. Thus, the projected net trade balance for the LDC's in these commodities is less favorable, since the growth in their import costs would exceed their growth in export earnings.

PUBLICATIONS REPORTING RESULTS OF USDA AND
FOREIGN RESEARCH CONTRACTS

World Analysis

Rojko, Anthony S. and Mackie, Arthur B. "World Demand Prospects for Agricultural Exports of Less Developed Countries in 1980." Economic Research Service. FAER-60, 57 pp., June 1970.

Western Hemisphere

"Projections of Supply and Demand for Selected Agricultural Products in Central America Through 1980." Economic Research Service. (Study done by Battelle Memorial Institute, Columbus, Ohio, under contract). 261 pp., August 1969.

"Chile: Demand and Supply Projections for Agricultural Products, 1965-1980." Economic Research Service. (Study done by Catholic University of Chile, Economic Research Center, under contract). 130 pp., December 1969.

Urban, Francis S. "Agricultural Prospects in Chile." Economic Research Service. ERS-Foreign 288. 11 pp., January 1970.

Urban, Francis S. "Preview: Chile's Trade in Agricultural Products. Foreign Agriculture, Vol. VII, No. 42, pp. 9-10, October 20, 1969.

Far East

Long, Mary E. "Summary of Long-Term Projections of Agricultural Supply and Demand, Australia, 1965 and 1980." Economic Research Service. ERS-Foreign 274, 8 pp., August 1969.

Tang, Anthony M. "Long-Term Economic and Agricultural Commodity Projections for Hong Kong, 1970, 1975, and 1980." Economic Research Center--Chinese University of Hong Kong (in corp. with Economic Research Service), 248 pp., November 1969.

Gill, Anjad H. "Hong Kong's Expanding Agricultural Imports, Projections to 1980." Economic Research Service. ERS-Foreign 296, 11 pp., April 1970.

Research Work Unit Project List -- Reporting Period July 1, 1969 to June 30, 1970

Research Work: Unit Project Number	Research Work Unit Project Titles	Work Locations During Past Year	Work Project Inc. in	
			Summary of: Progress (Yes-No)	Area and Subheading
FRA 11	:Current situation and short-run outlook	:Washington, D.C.	: Yes	: Area 1
-1	:World agricultural situation	:Washington, D.C.	: Yes	:
-2	:Agricultural policies of foreign countries	:Washington, D.C.	: Yes	:
-3	:Appraisal of food supplies in foreign : countries	: Washington, D.C.	: Yes	:
-4	:Situation and outlook, Western Hemisphere	:Washington, D.C.	: Yes	:
-5	:Situation and outlook, Europe and Soviet Union	:Washington, D.C.	: Yes	:
-6	:Situation and outlook, Africa and Middle East	:Washington, D.C.	: Yes	:
-7	:Situation and outlook, Far East and Oceania	:Washington, D.C.	: Yes	:
FRA 12	:Demand for and competition with U.S. agricul- : tural exports	: Washington, D.C.	: Yes	: Area 2
-1	:Foreign competition and demand, Western : Hemisphere	: Washington, D.C.	: Yes	:
-2	:Foreign competition and demand, Europe and : Soviet Union	: Washington, D.C.	: Yes	:
E9-10-FRA-12	:French and West German grain policies since : 1925 and prospects for their change under : the Common Market	: Stanford, Calif.	: Yes	:
E40-FRA-12	:Survey of agricultural economic research : studies on the European Economic Community	: Tisbury Station, : England	: Yes	:
EX1-FRA-12	:Forecasting livestock inventories in selected : West European countries	: Stuttgart- : Hohenheim, Federal : Rep. of Germany	: Yes	:
EX1-FRA-12	:Agricultural marketing systems in selected : West European countries	: Munich, Federal : Rep. of Germany	: Yes	:
FRA 12 -3	:Foreign competition and demand, Africa and : Middle East	: Washington, D.C.	: Yes	:
FX1-FRA-12	:Location of agricultural research studies of : the French, English, and Portuguese : speaking countries of Africa	: Oxford, England	: Yes	:
FRA 12 -4	:Foreign competition and demand, Far East and : Oceania	: Washington, D.C.	: Yes	:
FRA-12-8	:Importance of major agricultural crops in the : economy of specified foreign countries	: Washington, D.C.	: Yes	:
FRA-12-9	:African agricultural information recovery	: Lancaster, Va.	: Yes	:
FRA 13	:Long-range outlook for U.S. agricultural : exports	: Washington, D.C.	: Yes	: Area 3
-1	:World food budget, by country and region	: Washington, D.C.	: Yes	:
-2	:Projection of exports of U.S. farm commodities	: Washington, D.C.	: Yes	:
-3	:Long-term projections of foreign supply and : demand for agricultural products by country, : region, and for the world	: Washington, D.C.	: Yes	:
-4	:Long-term projections of foreign supply and : demand in the Western Hemisphere	: Washington, D.C.	: Yes	:
S1-FRA-13	:Long-term projections of supply and demand for: : selected agricultural products in Argentina	: Buenos Aires, : Argentina	: Yes	:
S3-FRA-13	:Long-term projections of supply and demand for: : agricultural products in Brazil	: Rio de Janeiro, : Brazil	: Yes	:

Research Work Unit Project List -- Reporting Period July 1, 1969 to June 30, 1970

Research Work: Unit Project Number	Research Work Unit Project Titles	Work Locations During Past Year	Work Project Inc. in	
			Summary of: Progress (Yes-No)	Area and Subheading
FRA 13-5	:Long-term projections of foreign supply and demand in Europe and the Soviet Union	:Washington, D.C.	:Yes	:
E4-FRA-13	:Projections of the supply, demand, and trade in Belgium, 1970 and 1975	:Antwerp, Belgium	:Yes	:
E7-FRA-13	:Projections of supply, demand, and trade in 1970, 1975, and 1980 in Denmark	:Aarhus, Denmark	:Yes	:
E29-FRA-13	:Updating of the projections of the supply, demand, and trade in 1970, 1975, and 1980 in the U.K.	:Oxford, England	:Yes	:
E40-FRA-13	:An aggregation of supply and demand projections for the European Economic Community (EEC) country studies	:Munich, Federal Rep. of Germany	:Yes	:
FRA 13-6	:Long-term projections of foreign supply and demand in Africa and the Middle East	:Washington, D.C.	:Yes	:
A8-FRA-13	:Projections of supply and demand for agricultural products in Iran	:Logan, Utah	:Yes	:
F13-FRA-13	:Revision and extension of projections for agricultural products in Nigeria	:Edinburgh, Scotland	:Yes	:
FX1-FRA-13	:Development of methodology for analyzing the effect of African urbanization on agricultural imports	:Edinburgh, Scotland	:Yes	:
FRA-13-7	:Long-term projections of foreign supply and demand in the Far East and Oceania	:Washington, D.C.	:Yes	:
A6-FRA-13	:Projections of supply and demand for agricultural products in Taiwan	:Taipei, Taiwan	:Yes	:
A7-FRA-13	:Update projections of supply and demand for agricultural products in India	:New Delhi, India	:Yes	:
A13-FRA-13	:Food consumption in the Republic of Korea	:Seoul, Korea	:Yes	:
A13-FRA-13	:Refine a previous study on food consumption in the Republic of Korea	:Seoul, Korea	:Yes	:
A21-FRA-13	:Effects of urbanization on food consumption patterns in the developing market of Thailand	:Minneapolis, Minn.	:Yes	:
A27-FRA-13	:Long-term projections of supply and demand for agricultural products in Indonesia	:Djakarta, Indonesia	:Yes	:
FRA 13-8	:Demand prospects for exports of less developed countries	:Washington, D.C.	:Yes	:
FRA 13-9	:Evaluation of studies of supply and demand of agricultural commodities in foreign countries	:Washington, D.C.	:Yes	:

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